

REMARKS

The Office Action mailed on January 7, 2009, has been reviewed and the comments of the Patent and Trademark Office have been considered. Prior to this paper, claims 1-12 were pending. By this paper, Applicants cancel claim 11, and add claims 12-15. Therefore, claims 1-10 and 12-15 are now pending.

Applicants respectfully submit that the present application is in condition for allowance for at least the reasons that follow.

Interviews of April 02 and 06, 2009

Examiner Rump is thanked for extending the courtesy of an interview to Applicant's representatives on April 02 and 06, 2009, where it was agreed that if the pending claims were amended to recite that the first intermediate layer "consists of" recited components, the claims would be examined to exclude other components.

In view of the telephone interviews of April, 2009, Applicants submit that the above provides a complete and proper recollection of the substance of the interview, per MPEP §713.04.

Specification Objections

In the Office Action, the specification is objected to. Applicants have amended the specification, as seen above, and respectfully request reconsideration in view of those amendments.

Rejections Under 35 U.S.C. §101

It is respectfully submitted that the cancellation of claim 11 renders the rejections under 35 U.S.C. §101 moot.

Rejections Under 35 U.S.C. §112, Second Paragraph

In the Office Action, claims 2 and 11 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicants regard as the invention. The cancellation of claim 11 renders the rejection of claim 11 moot, and, Applicants have amended the claim set, and respectfully submit that the rejections against claims 1 and 2 are moot, but, in view of the possibility that one or more of the new claims may be rejected, Applicants note the following.

There are various systems used to “group” the elements of the periodic table, some of which utilize Arabic numerals, some of which utilize a combination of Arabic numerals and the letters “A” and “B,” and some of which utilize a combination of Roman numerals and the letters “A” and “B.” Further, with respect to the latter two systems, the use of the “A” and “B” indicators is reversed, relative to the columns of the chart, between the two. In this regard, Applicants point to the copy of the periodic table presented in Appendix A of this paper, which utilizes all of the just-described systems.

As may be seen from the table in Appendix A, Titanium (Ti) is both a Group IVB metal and a Group 4A metal, and Chromium (Cr) is both a Group VIB metal and a Group 6A metal. That is, the pertinent columns include the identifier “4A” and “IVB” with respect to Titanium, and “6A” and “VIIB” with respect to Chromium.

As the ordinary artisan would have known that there are different systems used to group the metals of the periodic table, the claims are not indefinite. Reconsideration is requested.

Claim Rejections Under 35 U.S.C. §102

Claims 1, 3-7, 10, 11 and 12 stand rejected under 35 U.S.C. §102(b) as being anticipated by Bekaert (EP Patent No. 0856592). In response, in order to advance prosecution, and without prejudice or disclaimer, Applicants have amended the claims, as seen above, and request reconsideration in view of the reasons that follow.

Applicants rely on MPEP § 2131, entitled “Anticipation – Application of 35 U.S.C. 102(a), (b), and (e),” which states that a “claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Section 103 amplifies the meaning of this anticipation standard by pointing out that anticipation requires that the claimed subject matter must be “*identically* disclosed or described” by the prior art reference. (Emphasis added.) It is respectfully submitted that Bekaert does not describe each and every element of any of the claims rejected as anticipated.

As seen above, the claims now recite that the first intermediate layer *consists of* at least one of Ti, Cr, TiC, TiN, TiCN, CrN or Cr₃C₂. Accordingly, the first intermediate layer excludes the layer of Bekaert asserted to correspond to the first intermediate layer, and, therefore, the claims are not anticipated.

Reconsideration is requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 2 and 8-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bekaert. In response, in order to advance prosecution, and without prejudice or disclaimer, Applicants have amended independent claim 1, and respectfully submit that no claim is obvious in view of Bekaert, as claim 1 explicitly excludes the arrangement of Bekaert. Indeed, the layer of Bekaert alleged to correspond to the layer of claim 1 are layers of DLN/DLC materials that just happen to be doped with Ti. In contrast, the first intermediate layer of claim 1 includes at least one of Ti, Cr, TiC, TiN, TiCN, CrN or Cr₃C₂, and does not include a DLN/DLC component. Thus, claim 1 cannot be obvious in view of Bekaert.

Allowance of the application is requested.

New Claims

Applicants have added new claims 13-15. These claims variously utilize the transitional phrases “consisting of” and “consisting essentially of.” The claims that recite “consisting of” are not anticipated or obvious in view of Bekaert for at least the pertinent reasons detailed above. The claims that recite “consisting essentially of” are not obvious because the layers of Bekart are DLN/DLC layers, and the introduction of DLN/DLC into the first intermediate layer would change the basic and novel characteristics of that layer, as the application makes clear that the first intermediate layer is a metal based layer, while the second and third layers are the DLN/DLC layers, and thus incorporation of DLN/DLC into the first layer is forbidden by all of the new claims. Entry and allowance is requested.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

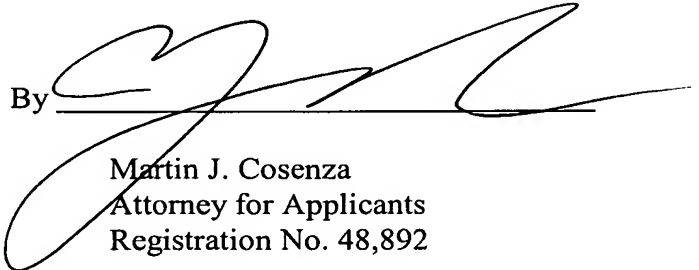
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Rump is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date 4/7/2009

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APPENDIX A

alte IUPAC-Empfehlung

neuer Vorschlag der IUPAC-1985
Vom Chemical Abstracts Service bis 1986
verwendete Gruppenbezeichnung

Relative Atommasse (Atomgewicht); * bei Radioelementen: Nuklidmasse eines wichtigen Isotops (Massenzahl s. Zeile 4), Uran und Thorium: natürliches Isotopengemisch
A: Zahl natürlicher Isotope; (r): nur Radioisotope in natürlichen Zerfallsreihen oder aus anderen natürlichen Kernprozessen
Massenzahlen der häufigsten natürlichen Isotope;
natürliche Radioisotope
Natürliche Häufigkeit des Isotops in %
Erste Ionisierungsenergie in eV
(Gasförmige Elemente in g/L bei 10¹³ mbar)
Schmelzpunkt (feste Elemente) oder
Siedepunkt (flüssige und gasförmige Elemente) in °C

Wichtiges oder länglebigstes
Radioisotop (wichtige
Zerfallsarten) Halbwertszeit

Ordnungszahl

Elementensymbol:
Fe feste Elemente
Hg flüssige Elemente (20°C)
G gasförmige Elemente
* radioaktive Elemente mit nachweisbarem natürlichen Vorkommen (z. T. nur in geringen Mengen, z. B. in natürlichen Zerfallsreihen)
K künstliche Elemente

3A IIIB 4A IVB 5A 6A 7A 8A 9A 10A 11A 12A 13A 14A 15A 16A 17A 18A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 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